

not our botanical books be always placed in connection with the herbarium? When, for instance, one desires a volume of the *Prodromus*, is it quite fair to expect him to walk a quarter of a mile, or even to leave his special building for it? May this "growl" be not wholly ineffectual!

Brown University, Providence, R. I.

W. W. BAILEY.

Hypnum Barberi.

In a letter lately received from Mr. J. Cardob of Slenay, France, he says that Mr. Renauld has concluded that *Hypnum Barberi* Renauld, of which a description was published in the *American Naturalist*, vol. XVIII, should be referred to *Hypnum compactum* Muell. Therefore number 886 of my Catalogue of Musci and Hepaticæ should be struck out.

Wellesley College.

CLARA E. CUMMINGS.

Dispersion of tree-seeds.

My own observations are confirmatory of Professor Beal's note in the January GAZETTE. I have long held the opinion that the seeds of the birches and larches, that here spring up so freely in an open field, are distributed chiefly by means of the drifting snow, or rather by blowing along on the surface of the frozen crust.

St. Stephen, New Brunswick.

J. VROOM.

Tumble-weeds.

While speaking of "tumble-weeds" other than those of our own country, Dr. Bessey might have mentioned the curious Crucifer, *Anastatica Hierochuntina*, popularly known as the "Rose of Jericho," though this name is also applied to the hygrometric Selaginellas. It is a native of the sandy deserts of the Levant. At maturity, the leaves fall, the branches (which arise near the base) curl inwards and form a globular mass which the winds uproot and roll about at their will. On being moistened the branches straighten and the pods open. Undoubtedly this habit of "tumbling" has been acquired by these different species to secure wider dissemination.

Cambridge, Mass.

QUISQUIS.

CURRENT LITERATURE.

Synoptical Flora of North America. Supplement and Indexes to Gamopetalæ. Asa Gray, LL.D.

The first part of this work was published in 1878, containing the Gamopetalæ after Compositæ. The part embracing the Compositæ appeared in 1884. As some years must elapse before the whole work can be completed it became necessary to publish a supplement to contain additions and corrections. This was especially needed for the older part, and as the first issue of it has been exhausted, the whole of Gamopetalæ have been bound into a single volume, with such changes as can be made upon electrotpe plates, containing also this supplement and new indexes.

It is impossible to note with any fullness the changes proposed, when the whole supplement of 80 pages is devoted to nothing else. The point of chief interest to botanists is that they can now obtain a single authoritative book which brings up to date all our knowledge of the Gamopetalæ of North America, and that they can obtain it at a price so reasonable that no botanist can afford to be without it.

The principal changes naturally occur in the orders after Compositæ. An interesting addition to our flora is *Littorella lacustris*, discovered at several northern stations by our Canadian botanists and others. The recasting of

Gilia, to include Collomia, is a very necessary change, and naturally some changes in nomenclature follow. The revision of the section of Phacelia, which contains *P. glandulosa*, *Neo-Mexicana*, etc., has brought relief to some of us whose specimens paid no attention to the old group characters.

The Eritrichium group of Borraginaceæ takes on now its modern appearance, as already noted in these pages, and the genus Krynitzkia contains most of its species.

The genus Mimulus is also revised in view of Mr. E. L. Greene's new arrangement in *Bull. Calif. Acad.*

The most important changes have already appeared in periodical publications, and chiefly in the Proceedings of the American Academy. It is the earnest wish of botanists that the author who has so fully presented this important group of Dicotyledons may be given the time and strength to finish the great work of which this forms so important a part.

English Worthies: Charles Darwin. By Grant Allen. 16°. pp. vi, 201. New York: D. Appleton & Co. 1885.

According to his announcement in the preface, Mr. Grant Allen makes no attempt to enter into the details of the philosopher's life in its domestic and social relations, except so far as these touch his scientific work. He deals with his position as a thinker and worker, bringing out especially his relation to the doctrine of evolution and to those who had preceded him in its development and advocacy. Prominent among those who were preparing the way for Darwin and his work are mentioned Buffon, St. Hilaire, Goethe, Erasmus Darwin, and Lamarck. To the latter, in connection with Malthus, is given the first place in suggesting the solution of difficulties and confirming the opinions of this eminent biologist. The author brings out with great clearness the circumstances that bore most forcibly upon the life-work of the man whom nature had so grandly fitted to fill no small niche in the temple of science—himself a good illustration of his own theory of "natural selection." Schooled, not at Oxford, but at Cambridge, where scientific rather than classical studies held the prominent place, it was through the recommendation of his Professor there that he received the appointment as naturalist of the Beagle—an inestimable privilege to one well prepared to begin the study of nature on so grand a scale. No part of the book makes a more pleasing impression upon the reader than the chapter entitled "The Period of Incubation," in which the author dwells on the patience and painstaking of the author of the *Origin of Species*. Darwin's was a genius of the type so well described by some one as being "a faculty for work." To retain and work upon a tentative theory for fifteen years needed almost superhuman patience. But how richly has he been repaid in the stability of his work, to which its strongest enemies can only oppose an unsupported denial. Mr. Allen takes no pains to conceal the fact that his acceptance of the theory goes beyond that of its great expounder. The undercurrent of extreme materialistic views throughout the book in no way advances the cause of science and we can not but regret that the author has seen fit to use his brilliant style to cast a slur upon those who are not yet ready to say with Sir Charles Lyell, "we must go the whole orang." There are many biologists whose powers of reasoning and opportunities of knowing are perhaps quite equal to Mr. Allen's, who are unwilling to accept materialism as the outcome of the Darwinian theory. More respect for such opinions would have well become the writer of this attractive volume.

Ueber intramolekulare Athmung; von W. Pfeffer. Extracted from —? pp. 636-685.

This extract comes without the least intimation of its source, an unfortunate omission. In it Dr. Pfeffer continues the discussion on intramolecular respiration, the present experiments being based on the work of our countryman, D. W. P. Wilson, to whom full acknowledgement is made. A full discussion of the method of experimentation used, together with a figure of the

apparatus, is followed by the details of experiments with seventeen different plants, phanerogams and cryptogams, in various stages, seedlings, leafy twigs, inflorescences or entire plants, at various degrees of temperature and illumination. In the different experiments the ratio of the intramolecular to the normal respiration (*i. e.* $I \div N$) varies from 0.077 in young leafy twigs of *Abies excelsa*, to 1.197 in seedlings of *Vicia faba* at 23° C. The greater part of the paper is occupied by a discussion of these results and critical remarks upon the theoretical explanation of the phenomena of normal and intramolecular respiration.

NOTES AND NEWS.

DR. HENRY G. BULL, of Hereford, England, a mycologist, died October 31, 1885, at the age of 67.

DR. J. E. DUBY, the well-known mycologist, died at Geneva, Switzerland, November 24, 1885, 88 years old.

MILLSPAUGH'S third fascicle of American medicinal plants has appeared, containing 30 colored plates, with descriptive texts.

THE REPORT of the Forestry Commission of New Hampshire, 1885, is a hundred-page pamphlet containing much information regarding the forests of that state.

DR. J. H. OYSTER, of Paola, Kansas, has published a catalogue of North American plants, which seems to be well done, and is surely very useful as a check-list.

STATE AND PROVINCIAL LEGISLATION in the interests of horticulture and forestry is the title of a pamphlet of twenty-eight pages, by Charles W. Garfield, containing valuable information.

AN EXTENDED ACCOUNT of the American pear blight, written by Dr. J. H. Wakker, has been published in *Het Nederlandsche Tuinbouwblad*, a gardening journal of Holland, with a view to ascertaining if the disease is found in that country.

PROF. EDOUARD MORREN has distributed his address entitled "*La sensibilité et la motilité des végétaux.*" It was delivered at a public meeting of the science class of the Royal Academy of Belgium, and is a delightful presentation of a very interesting subject.

AN ATLAS DES CHAMPIGNONS is being published by Octave Doin, of Paris, which gives the principal edible and poisonous mushrooms of France. The authors are MM. Richon and Roze. It is a large quarto with admirable colored plates, and is issued in fascicles at a reasonable price.

THE HERBARIUM of Columbia College, New York City, is being removed to the third floor of the library building. This will give many advantages, not the least of which will be a thorough protection against fire, the building being fire-proof. It will be several months before the work of removal is completed.

PROF. CHAS. E. BESSEY has been appointed State Botanist of Nebraska, and "the sum of twenty-five dollars, or so much thereof as may be necessary," was appropriated to pay the incidental expenses connected with the appointment. With such munificent appropriations it can not be long before the botany of this country is well worked up.

IN THE JOURNAL OF BOTANY for February, James Britten gives proofs to show that the genus *Brodiaea* of Smith should bear an older name, *Hookera* of Salisbury. It is a tardy act of justice to Salisbury, and the case is so well presented that there seems to be no reason for not accepting the change. In that event our species may retain their specific names.

IN THE BULLETIN of the Royal Society of Belgium, Vol. xxiv, J. C. Lecoyer has published a monograph of the genus *Thalictrum*, with five plates representing the types of akenes. The genus numbers 79 species, of which we have about 10. The name *T. Cornuti* L. is suppressed, which brings up *T. corynellum* DC., but Dr. Gray claims that *T. polygamum* Muhl. is earliest and well enough defined to be distinguished from any other species. By Muhlenberg's name, therefore, this species will probably hereafter be known, at least among American botanists.